

Application No.: 10/658,260

Docket No.: 22106-00042-US

REMARKS

Claims 14-26 are pending in the case. Claims 1-13 have been canceled and new claims 14-26 have been added by way of the present amendment. Reconsideration is respectfully requested.

In the outstanding Office Action, claim 1 and claim 4 were objected to and clarification was required; claims 1-5 and 7-10 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 7,777,932 (Hara et al.); claim 6 was rejected under 35 U.S.C. 103(a) as being unpatentable over Hara et al. in view of U.S. Patent No. 5,548,279 (Gaines); claims 11-13 were rejected under 35 U.S.C. 103(a) as being unpatentable over Hara et al. in view of U.S. Patent No. 4,706,073 (Vila Masot).

Claim Objections

Claim 1 and claim 4 were objected to and clarification was required. Claim 1 and claim 4 have been canceled and replaced by claim 14 and claim 17, respectively, in which the outstanding claim objections have been addressed. Therefore, Applicants respectfully request the outstanding claim objections be withdrawn.

Claim Rejections under 35 U.S.C. Section 102

Claims 1-5 and 7-10 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 7,777,932 (Hara et al.). Applicants respectfully traverse the rejection.

New claims 14-26 have been added and claims 1-13 have been canceled by way of the present amendment. New claims 14-26 correspond to the subject matter covered in original claims 1-13. In particular, new claim 14 incorporates the subject matter of claim 1 and replaces the wording "means for the partialised feeding of such means for detecting a current" with the wording "means for feeding the means for detecting a current in an intermittent manner". Support for the new claims is provided by at least by the original claims in the specification, at least at page 7, line 23 to page 8, line 7; page 8, lines 15-25; and shown at least in FIG. 4, of the

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specification. Therefore, it is respectfully submitted that the new claims raise no question of new matter.

Hara et al. discloses a magnetic field sensor including an amplifier and magnetic field element for outputting a signal to a switch circuit according to the strength of an applied magnetic field.¹ In particular, Hara et al. discloses a Hall element 1, a switch circuit 2, a voltage amplifier 3, a capacitor 4, which is a memory element, and a switch 5.²

However, Hara et al. nowhere discloses, as claim 14 recites:

means for detecting a current in an intermittent manner and according to a predefined frequency that depends from an accuracy of the measurement of current to be performed and an energy savings to be achieved.

That is, Hara et al. nowhere discloses the limitations of: "means for detecting a current in an intermittent manner and according to a predefined frequency," as recited in claim 14. In addition, Hara et al. fails to disclose that "a predefined frequency depends from an accuracy of the measurement of current to be performed and to an energy savings to be achieved," as recited in claim 14.

In addition, Hara et al. discloses that the power of the Hall element 1 can be switched off when the magnetic field is constant and a continuous reading of the current is not needed.³ That is, Hara et al. discloses a manner to adapt the operation of the Hall sensor to the nature of the magnetic field to be measured. It is respectfully submitted that this mode of operation teaches away from the claimed invention because the current value read at the beginning of any of these time intervals can be kept as a constant reference.⁴ Therefore, in this mode of operation, the switching frequency of the Hall sensor 1 cannot be a "predefined frequency," as recited in claim 14 since the frequency in Hara et al. depends essentially from the behavior of the magnetic field to be measured.

Moreover, the "predefined frequency" of the claimed invention, as recited in claim 14: "depends from an accuracy of the measurement of current to be performed and an energy

¹ Hara et al. at ABSTRACT.

² *Id.* at column 10, line 67 to column 11, line 3.

³ *Id.* at column 12, lines 4-12.

⁴ *Id.* at column 12, lines 9-13.

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savings to be achieved." This is in stark contrast to Hara et al., where the frequency depends on the magnetic field.

Therefore, it is respectfully submitted that Hara et al. does not disclose, anticipate or inherently teach the claimed invention and that claim 14, and claims dependent thereon, patentably distinguish thereover.

Claim Rejections under 35 U.S.C. Section 103

Claim 6 was rejected under 35 U.S.C. 103(a) as being unpatentable over Hara et al. in view of Gaines. Applicants respectfully traverse the rejection.

Claim 6 has been canceled and replaced by new claim 19 by way of the present amendment. As discussed above, the new claims are supported by the original claims, specification and drawing and therefore, raise no question of new matter.

Claim 19 is ultimately dependent on claim 14. As discussed above, Hara et al. does not disclose claim 14. Therefore, at least for the reasons discussed above, Hara et al. does not disclose claim 19.

In addition, the outstanding Office Action acknowledges other deficiencies of Hara et al. and attempts to overcome these deficiencies by combining with Gaines.⁵ However, Gaines cannot overcome the deficiencies of Hara et al., as discussed below.

Gaines discloses a method and apparatus for detecting a power line.⁶ In particular, Gaines discloses a power line detecting apparatus that includes a sensing means 16 for detecting the magnetic field generated by the current conducted through power lines 12.⁷ Further, Gaines discloses a controller 60, memory device 62 and analog-to-digital converter 64.⁸

However, Gaines nowhere discloses, as claim 14 recites:

means for detecting a current in an intermittent manner and according to a predefined frequency that depends from an accuracy of the measurement of current to be performed and an energy savings to be achieved.

⁵ Outstanding Office Action at page 5, paragraph 4, lines 3-6.

⁶ Gaines at ABSTRACT.

⁷ *Id.* at FIG. 2; column 4, lines 19-23.

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That is, Gaines nowhere discloses the limitations of: "means for detecting a current in an intermittent manner and according to a predefined frequency," as recited in claim 14. In addition, Hara et al. fail also to discloses "a predefined frequency depends from an accuracy of the measurement of current to be performed and to an energy savings to be achieved," as recited in claim 14. Thus, Gaines cannot overcome the deficiencies of Hara et al.

Therefore, it is respectfully submitted that neither Hara et al. nor Gaines, whether taken alone or in combination, disclose, suggest or make obvious the claimed invention and that claim 19, and claims dependent thereon, patentably distinguish thereover.

Claims 11-13 were rejected under 35 U.S.C. 103(a) as being unpatentable over Hara et al. in view of Vila Masot. Applicant respectfully traverses the rejection.

Claims 11-13 have been canceled and replaced by claims 24-26 by way of the present amendment. Claims 24-26 ultimately depend on claim 14. As discussed above, Hara et al. does not disclose the limitations of claim 14. Therefore, at least for the reason discussed above, claims 24-26 are not disclosed by Hara et al.

The outstanding Office Action acknowledges other deficiencies in Hara et al. and attempts to overcome those deficiencies with Vila Masot. However, Vila Masot cannot overcome the deficiencies of Hara et al., as will be discussed below.

Vila Masot discloses an alarm system used in conjunction with a circuit breaker panel box indicating the presence of an overload condition.⁹ In particular, Vila Masot discloses a light sensor or a plurality of light sensors 40 is mounted on the inside of the circuit panel door 42.¹⁰ In addition, Vila Masot discloses the circuit panel further includes a plurality of circuit breaker switches 44 and a light-emitting diode, electroluminescent device 46 or similarly illuminated lamp associated with each switch.¹¹

However, Vila Masot nowhere discloses, as claim 14 recites:

means for detecting a current in an intermittent manner and according to a predefined frequency that depends from an accuracy of the measurement of current to be performed and an energy savings to be achieved.

⁸ *Id.* at FIG. 3; column 4, lines 18-44.

⁹ Vila Masot at ABSTRACT.

¹⁰ *Id.* at column 4, lines 2-4.

¹¹ *Id.* at column 4, lines 2-4.

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That is, Vila Masot nowhere discloses the limitations of: "means for detecting a current in an intermittent manner and according to a predefined frequency," as recited in claim 14. In addition, Vila Masot fail also to disclose that "a predefined frequency depends from an accuracy of the measurement of current to be performed and to an energy savings to be achieved," as recited in claim 14. Thus, Vila Masot cannot overcome the deficiencies of Hara et al.

Therefore, it is respectfully submitted that neither Hara et al. nor Vila Masot, whether taken alone or in combination, disclose, suggest or make obvious the claimed invention and that claims 24-26, and claims dependent thereon, patentably distinguish thereover.

Conclusions

Please charge our Deposit Account No. 22-0185, under Order No. 22106-00042-US1 from which the undersigned is authorized to draw for any fees that are due with this response.

Dated: August 12, 2005
411331_1

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